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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,685	07/21/2003	Karlheinz Haubennestel	1238.002US2	5320

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EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/623,685	HAUBENNESTEL ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-2 and 4-11 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 30, 2006 has been entered. ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2 and 4-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim amendment changing the term "heterocyclic" to "heteroaryl" has not been found in the originally filed specification and applicants have not pointed out where in the originally filed specification said basis exist. Applicants employ the term heterocyclic in the specification at page 3, line 16. Applicants disclose species imidazole, morpholine, and piperidine species. It is unclear

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from said recitation that applicants contemplated the scope of all heteroaryls at the time of the original disclosure.

Applicants (claims 2 and 11) further amend claims 2 and 11 with a limitation defining subscript "x" to read 1 to 120. Applicants assert (page 6 of response) the basis for said definition is found in examples 8 and 9 of the original specification, which discloses PLURIOL® A 520 A. Applicants further assert PLURIOL® are produced by BASF and "span a molecular weight of about 350 to 5000, as is shown in the accompanying copy of the BASF product specifications."

This is not deemed to be proper support for the subscript "x" range. No accompanying copy of the BASF product specifications was provided nor are they otherwise of record. Initially, the single use of the species to PLURIOL® A 520 A in the examples 8 and 9 is not adequate basis for the full scope of all PLURIOL® materials, which further contain non-amine containing materials. It is unclear that applicants had said scope of the claims in their possession at the time of filing the invention. To the extent that the PLURIOL® A 520 A relates to a species having a molecular weight of 520 units, applicants would be entitled to the subscript value for said species. This appears to be about 10.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 2 and 11 are indefinite since they employ an improper alternative grouping, e.g., "selected from the group consisting of c) . . . or . . . comprising . . .". The alternative groups employ open language. It is unclear what is the scope of the alternative grouping regarding the scope of the individual members, e.g., "divalent radical comprising", and the scope of the group as a whole. See MPEP 2173.05(h).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-2 and 4-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Efka-Chemicals BV, EP 0 311 157 A1, as evidenced by patent family member Quednau et al, US 5,688,858, and Becher et al, US 4,302,561.

The claims employ open transitional language, i.e., "comprising". MPEP 2111.03 sets forth "'Comprising' is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim."

Furthermore, the claims are drafted in the "product-by-process" claim form. MPEP 2113 sets forth "[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the

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fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established.”.

Efka-Chemicals BV (example 4) discloses compounds reading on at least claim 1 but lacks the explicit disclosure of the materials property of the molecular weight. Since the materials disclosed in the Efka-Chemicals BV reference are disclosed as pigments dispersants, said materials to function as dispersing agents for the pigments would have inherently been expected to have the molecular weight as claimed. Furthermore, see MPEP 2112(III) regarding rationale for making a rejection under 35 USC 102/103.

The use of stearyl methacrylate reads on the transesterification of the acrylic ester-acrylamide polymers. Claim 2 employs open language, “comprising”, in defining the further amines, which read on the materials of Efka-Chemicals BV (page 4, lines 48 et seq). Efka-Chemicals BV (page 4, lines 35 et seq, and examples) discloses the use of heterocyclic groups with basic nitrogens. The basicity of the amines would act as a catalyst as claimed. Efka-Chemicals BV (page 4, lines 45-47) further teaches the addition of salt forming acids, preferably monocarboxylic acids.

Furthermore, the claims require the aminolysis product of an acrylic acid alkyl ester polymer with at least one amine. Said amine is set forth in the claim. The claims do not set forth what is the reaction product of the aminolysis reaction nor do the claims state the aminolysis must be between the acid ester and the amine to form an amide. Even if applicants' assertions regarding the reactivity were taken as correct, the polymers of Efka-Chemicals BV, EP '157 A1, as evidenced by patent family member the Quednau et al reference and the Becher et al reference read on the present claims,

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either by the aminolysis product resulting from the reaction of a carboxylic acid ester with an amine or the aminolysis product resulting from the reaction of a an epoxide with an amine, wherein the epoxides is part of a polymer containing an carboxylic acid ester.

To the extent the Efka-Chemicals BV reference differs from the claims in the lack of an explicit disclosure of the claimed molecular weight range, said range is conventional as shown by the Becher et al reference.

Becher et al (title, abstract and claims) discloses related polymeric pigment dispersants to those of the Efka-Chemicals BV reference. Becher et al (column 5, lines 56 et seq) teaches polymer molecular weights for related dispersing agent, which are entirely encompassed by the broader claimed ranges.

Becher et al is clearly combinable with the Efka-Chemicals BV reference since it is cited in the patent family member of the Efka-Chemicals BV reference, i.e., the Quednau et al reference. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ polymers having a weight average molecular weight of 1,000 to 10,000, preferably 2,000 to 6,000 as shown in the Becher et al reference.

10. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Efka-Chemicals BV, EP 0 311 157 A1, in view of patent family member, Quednau et al, US 5,688,858, and Becher et al, US 4,302,561. Efka-Chemicals BV (example 4) discloses dispersing agents as set forth in the above rejection. Said basis is incorporated herein by reference.

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Efka-Chemicals BV further differs from the claims in the process step of transesterification.

Efka-Chemicals BV (page 6, lines 53 et seq) teaches the use of the dispersing agents in aqueous and non-aqueous systems. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ higher alcohols for the advantage of increasing the non-aqueous system solubility, thereby rendering the dispersing agent more hydrophobic based on the fatty chain structures.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-7 and 10-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S.

Patent No. 6,596,816. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims encompass the patented claims.

Response to Arguments

13. Applicant's arguments filed November 30, 2006 have been fully considered but they are not persuasive.

14. Applicants (pages 5 and 6) assert the term "comprising" defining the subgenus in the alternative groupings of claims 2 and 11 are deemed to be proper and define the species of the alternative grouping. This has not been deemed persuasive since the alkylene radicals are open ended and are open to other components of the alkylene radical. "During patent examination, the pending claims must be 'given *>their< broadest reasonable interpretation consistent with the specification.'" See MPEP 2111.

Furthermore, "The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, un-recited elements or method steps.". See MPEP 2111.03.

15. Applicants (pages 6 through 9) assert that based on known reactivities of the glycidyl epoxide group and the alkyl ester groups with amines, it is apparent that the amine is reacting with the epoxy group.

This has not been deemed persuasive for the following reasons:

(a) Applicants do not provide the citations relied and said citations are not of record. Applicants have not provided the literature evidence showing that the aminolysis reaction does not occur. Since the claims are drafted in product-by-process format, applicants have the burden of coming forward with objective evidence or reasoning to patentably distinguish the claims, wherein the examiner has provided a *prima facie* case under anticipation and/or obviousness.

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(b) Applicants note that the amine and carboxylic esters are not very reactive. A review of the present claims indicates that no limitation of the degree or amount of aminolysis is claimed.

(c) As applicants are aware, claims are given their broadest reasonable interpretation during examination. Attention is directed to www.mercksource.com/pp/us/cns/cns_hl_dorlands.jspzQzpgzEzzSzppdocszSzuszSzcommonzSzdorlandszSzdorlandzSzmdm_a_29zPzhtm, wherein it states: "(am-i-nol-y-sis) (am²[schwa]-nol²[schwa]-sis) [amine + -lysis] reaction with an amine, resulting in the addition of (or substitution by) an imino group, —NH—." W.B. Sanders (copyright 2004), printed 02/2007. The claims require the aminolysis product of an acrylic acid alkyl ester polymer with at least one amine. Said amine is set forth in the claim. The claims do not set forth what is the reaction product of the aminolysis reaction nor do the claims state the aminolysis must be between the acid ester and the amine to form an amide. Even if applicants assertions regarding the reactivity were taken as correct, the polymers of Efka-Chemicals BV, EP '157 A1, as evidenced by patent family member the Quednau et al reference and the Becher et al reference read on the present claims, either by the aminolysis product resulting from the reaction of a carboxylic acid ester with an amine or the aminolysis product resulting from the reaction of a an epoxide with an amine, wherein the epoxides is part of a polymer containing an carboxylic acid ester.

16. Applicants (page 9) re-assert the Efka-Chemicals BV, EP '157 A1, as evidenced by patent family member the Quednau et al reference and the Becher et al reference do not make claims 10 and 11 obvious because they do not adequately provide the

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aminolysis reaction. This has been addressed above and is incorporated herein by reference.

17. The Emmons rejection has been withdrawn at this time based on the amendment, which is deemed to introduce new matter into the claims.

18. Applicants (page 10) indicate a terminal disclaimer will be filed upon the notification of allowable subject matter in the response filed January 5, 2006. The Double patenting rejection is deemed proper and has been maintained.

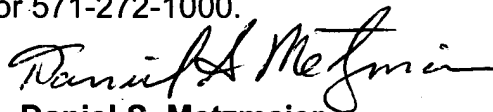
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM